

### REMARKS

This responds to the Office Action dated October 19, 2005. Claims 1-11 are pending in this application.

#### Reservation of the Right to Swear Behind References

Applicant maintains its right to swear behind any references which are cited in a rejection under 35 U.S.C. §§102(a), 102(e), 103/102(a), and 103/102(e). Statements distinguishing the claimed subject matter over the cited references are not to be interpreted as admissions that the references are prior art.

#### §102 Rejection of the Claims

1. Claims 6-8 and 10 were rejected under 35 USC § 102(e) as being anticipated by Epitau et al. (U.S. 2004/0021217, "Epitau"). Applicant respectfully traverses the rejections. To anticipate a claim, the reference must teach every element of the claim.<sup>1</sup> A claim in dependent form shall be construed to incorporate by reference all of the limitations of the claim to which it refers.<sup>2</sup>

#### *Regarding claims 6-8:*

Applicant cannot find in Epitau, among other things, any teaching or suggestion of "each of the insulating bases have a plurality of electrical leads running through the insulating base into an interior of the optical receiver and the optical transmitter, respectively,"

as recited in independent claim 6 and incorporated into dependent claims 7 and 8. Epitau describes "various leads coupled to the opposed recessed portions of the bottom ceramic layer," and "wire bonds couple leads of lead frame to bond pad."<sup>3</sup>

#### *Regarding claims 6-8 and 10:*

Applicant cannot find in Epitau, any teaching or suggestion of

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<sup>1</sup> M.P.E.P. § 2131.

<sup>2</sup> 35 U.S.C. § 112 ¶4.

<sup>3</sup> Epitau, ¶0048.

“an optical receiver housed in a first TO can, ... and ... an optical transmitter housed in a second TO can,”

as recited in independent claims 6 and 10 and incorporated into dependent claims 7 and 8. The Office Action asserts that a first and second [transistor outline] TO can is inherent in Epitaux because of the nature of the package.<sup>4</sup>

Applicant respectfully disagrees with the assertion of inherency because the Office Action has not established a *prima facie* case of inherency. According to the M.P.E.P., “in relying upon the theory of inherency, the examiner must provide basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.”<sup>5</sup> The Office Action does not assert that the allegedly inherent characteristic is necessary, and does not provide a basis in fact and/or technical reasoning to explain why a first and second TO can are inherent in Epitaux. Applicant respectfully submits that a first and second TO can does not necessarily flow from Epitaux at least for the reason that Epitaux describes disadvantages associated with devices that are configured to a can shape.<sup>6</sup> Additionally, in regard to claim 8, Applicant cannot find in Epitaux where a metal housing serves as a heat sink, as is recited in the claim.

Applicant respectfully requests reconsideration and allowance of claims 6-8 and 10.

### §103 Rejection of the Claims

2. Claim 1 was rejected under 35 USC § 103(a) as being unpatentable over Ito et al. (U.S. 6,948,863, “Ito”) in view of Wood et al. (U.S. 6,555,399, “Wood”). Applicant respectfully traverses the rejection.

To establish a *prima facie* case of obviousness, one criteria is the prior art reference (or references when combined) must teach or suggest all the claim limitations.<sup>7</sup> Applicant respectfully submits that all elements recited in claim 1 are not taught or suggested in the proposed combination of Ito and Wood.

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<sup>4</sup> Office Action, pg. 2.

<sup>5</sup> M.P.E.P. § 2112, citing Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

<sup>6</sup> Epitaux, ¶0007.

<sup>7</sup> M.P.E.P. § 2143.

Applicant cannot find in the proposed combination of Ito and Wood, any teaching or suggestion of

“a photodetector mounted on a first side of the first insulating base, ... ; and  
... a light generation device mounted on a first side of the second insulating base,”

as recited in claim 1.

The Office Action characterizes the stem 11 of Ito as an insulating base.<sup>8</sup> Applicant respectfully disagrees with this characterization. Ito describes a stem 11 made of a metal,<sup>9</sup> and where “lead pins are insulated from the stem 11 by sealing with a glass member.”<sup>10</sup> Therefore, the stem 11 is not insulating.

A second criteria to establish proper *prima facie* obviousness, is that there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.<sup>11</sup> According to the M.P.E.P., “to support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line or reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the references.”<sup>12</sup>

The Office Action states that Ito fails to disclose a metal cap hermetically sealed to the first side of the second insulating base to enclose the light generation device, and relies on Wood to provide the missing element.<sup>13</sup> The Office Action cites Wood to provide a motivation for the hermetic seal.<sup>14</sup> However, Ito describes where “the package accommodates the device portion and wiring board,” and that “since the package is made of metal, the leakage of signals transmitted through the device portion and wiring board is suppressed.”<sup>15</sup> Because Ito provides a first metal package, modifying Ito with Wood in the manner suggested by the Office Action

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<sup>8</sup> Office Action, pg. 4.

<sup>9</sup> Ito, col. 4, lines 50-51.

<sup>10</sup> Id., col. 4, lines 60-61.

<sup>11</sup> M.P.E.P. § 2143.

<sup>12</sup> M.P.E.P. § 2142, citing Ex Parte Clapp, 227 USPQ 972, 973 (Bd. App. & Inter. 1986).

<sup>13</sup> Office Action, pg. 4.

<sup>14</sup> Id., citing Wood col. 3, lines 1-23.

<sup>15</sup> Ito. Abstract.

would apparently provide a second metal package within the first. Because the references do not suggest such a modification and because the Office Action does not provide a line of reasoning as to the desirability of such “double packaging,” proper motivation is apparently lacking to modify Ito with Wood.

Applicant respectfully requests reconsideration and allowance of claim 1.

3. Claims 9 and 11 were rejected under 35 USC § 103(a) as being unpatentable over EpitauX in view of Ito. Applicant respectfully traverses the rejection.

Applicant respectfully submits that all elements recited or incorporated in the contested claims are not taught or suggested in the proposed combination of EpitauX and Ito. Applicant cannot find in the proposed combination of EpitauX and Ito, any teaching or suggestion of an “optical transponder ..., wherein the first and second TO cans have an impedance of approximately 50 ohms,”

as recited in claims 9 and 11. The Office Action states that EpitauX fails to teach impedance.<sup>16</sup> Applicant is only able to find a reference to impedance in Ito of reducing the impedances of the first and second wirings.<sup>17</sup> Thus, the proposed combination of EpitauX and Ito fails to teach or suggest the claimed subject matter of claims 9 and 11.

Additionally, Applicant submits that proper motivation is lacking to make the proposed combination of references. EpitauX refers to advantages of providing a planar platform to perform optical assemblies.<sup>18</sup> Ito describes a stem 11 having a mounting surface on which components are mounted,<sup>19</sup> and a wiring board on which components are mounted.<sup>20</sup> The wiring board is arranged non-planar to the stem.<sup>21</sup> Thus, EpitauX teaches away from what is disclosed in Ito and therefore proper motivation is lacking to combine Ito and EpitauX.

Further, the M.P.E.P. states that Graham v. John Deere Co. should be followed in the consideration and determination of obviousness under 35 U.S.C. § 103. The four factual inquiries enunciated in Graham include ascertaining the differences between the prior art and the

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<sup>16</sup> Office Action, pg. 4.

<sup>17</sup> Ito, col. 8, lines 58-67.

<sup>18</sup> EpitauX, ¶¶ 0007, 0060.

<sup>19</sup> Ito, col. 4, lines 46-49.

<sup>20</sup> Ito, FIG. 12.

<sup>21</sup> Ito, FIG. 6.

claims at issue.<sup>22</sup> Ascertaining the difference between the prior art and the claims at issue includes considering a reference in its entirety, including disclosures that teach away from the claimed invention.<sup>23</sup> Because EpitauX refers to disadvantages associated with devices configured to a can shape, EpitauX teaches away from the subject matter recited in claims 6 and 10 and incorporated into claims 9 and 11.

Applicant respectfully reconsideration and allowance of claims 9 and 11.

4. Claims 2-5 were rejected under 35 USC § 103(a) as being unpatentable over Ito in view of Wood and further in view of EpitauX. Applicant respectfully traverses the rejection.

Applicant submits that proper motivation is lacking to make the proposed combination of references. EpitauX refers to advantages of providing a planar platform to perform optical assemblies.<sup>24</sup> Ito describes a stem 11 having a mounting surface on which components are mounted,<sup>25</sup> and a wiring board on which components are mounted.<sup>26</sup> The wiring board is arranged non-planar to the stem.<sup>27</sup> Thus, EpitauX teaches away from what is disclosed in Ito and therefore proper motivation is lacking to combine Ito and EpitauX.

Additionally, EpitauX describes disadvantages associated with devices that are configured to a can shape.<sup>28</sup> Because a claim in dependent form shall be construed to incorporate by reference all of the limitations of the claim to which it refers,<sup>29</sup> EpitauX teaches away from the subject matter incorporated into the claims.

Further, Applicant cannot find in the proposed combination or references, wherein the first and second insulating bases are physically coupled to a metal housing of the optical transponder and the metal housing serves as a heat sink, as recited in claim 3. Applicant cannot find any reference to a heat sink in Ito or Wood, and Applicant cannot find where a metal housing serves as a heat sink in EpitauX.

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<sup>22</sup> M.P.E.P. § 2141.

<sup>23</sup> M.P.E.P. § 2141.02.

<sup>24</sup> EpitauX, ¶¶ 0007, 0060.

<sup>25</sup> Ito, col. 4, lines 46-49.

<sup>26</sup> Ito, FIG. 12.

<sup>27</sup> Ito, FIG. 6.

<sup>28</sup> EpitauX, ¶¶ 0007, 0038.

<sup>29</sup> 35 U.S.C. § 112 ¶4.

Furthermore, Applicant cannot find wherein the optical transponder has an impedance of 50 ohms as recited in claim 5. The Office Action states that Epitau fails to teach impedance.<sup>30</sup> As to Wood, Applicant cannot find any reference to impedance, and Ito only refers to impedance in regard to reducing the impedances of the first and second wirings;<sup>31</sup> not of an impedance of an optical transponder. Thus, the proposed combination of Ito, Wood and Epitau fails to teach or suggest the claimed subject matter of claim 5.

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<sup>30</sup> Office Action, pg. 4.

<sup>31</sup> Ito, col. 8, lines 58-67.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney ((612) 349-9592) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

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